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Patent Claims

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1. A braking system for vehicles, in particular utility vehicles, comprising at least one first brake circuit and at least one second brake circuit, the two brake circuits each having an
10 electrical control circuit, which respectively has an electronic control unit (20, 42) and its own power supply device (54, 55), and brake actuating devices (11, 12, 27, 28, 66, 67, 71, 72) which can be activated by the electronic control units (20,
15 42), and at least one brake actuating device (11, 12, 27, 28, 66, 67, 71, 72) being able to be activated by more than one electronic control unit (20, 42),
characterized in that
20 the brake circuits can be electrically activated via a foot brake valve (61), and
in that the foot brake valve (61) has two electrical braking transmitter devices which are each connected to the electronic control units
25 (20, 42) in such a manner that they are DC-isolated.
2. The braking system as claimed in claim 1, characterized in that
30 the electrical control circuits are DC-isolated from one another.
3. The braking system as claimed in claim 1 or 2, characterized in that
35 the electronic control unit (20) of the first brake circuit is connected to the electronic control unit (42) of the second brake circuit via a communications line (58), the communications

line (58) having a device (59) for the DC-isolation of the two control circuits.

4. The braking system as claimed in one of claims 1
5 to 3, characterized in that
the two control circuits have a common ground
connection (GND).

5. The braking system as claimed in one of claims 1
10 to 4, characterized in that
the electronic control units (20, 42) are
connected to other electrical or electronic
vehicle systems in such a manner that they are DC-
isolated.

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